

# Notice of Allowability

Applicati n N .

10/689,164

Examiner

Patricia L. Hailey

Applicant(s)

HWANG ET AL.

Art Unit

1755

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to an amendment filed on November 4, 2004.
2. ☒ The allowed claim(s) is/are 1-3, 18-26, 31, 37-45 and 52-70.
3. ☒ The drawings filed on 20 October 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
  - \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 011805.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

Applicants' remarks and amendments, filed on November 4, 2004, have been carefully considered. No claims have been canceled or added; claims 1-3, 18-26, 37-45, 52-71, and 75-77 remain pending in this application.

Support for the limitation "with each strata being up to 20 micrometers in thickness" can be found in the Specification at page 49, lines 22-25.

### *Election/Restrictions*

1. Applicant's election with traverse of Group I, claims 1-3, 18-26, 31, 37-45, and 52-70 in the previous Office Action is acknowledged. The traversal is on the ground(s) that there is no assertion that the inventions of Groups I and II are independent. This is not found persuasive because the Examiner takes the position that the invention of Group I (a catalyst and methods of use/preparation thereof) is independent and distinct from the invention of Group II. While the Examiner showed distinction between the two inventions, independence thereof was expected to be understood by Applicants. In any event, the inventions are independent because the invention of Group I does not rely on the invention of Group II, i.e., the catalyst and methods of its use and/or preparation are not required to make the invention of Group II. The invention of Group I, as stated in the original restriction requirement, has different functions, modes of operation, etc. Further, the invention of Group I is capable of use without the invention of Group II. The

catalyst as claimed can be employed in, for example, a process for the conversion of hydrocarbons, or in a catalytic cracking reactor.

The requirement is still deemed proper and is therefore made FINAL.

### EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Richard Negin on January 13, 2005.

*The application has been amended as follows:*

a. In lines 2 and 3 of claim 40, please delete the phrase "wherein the substrate comprises a metal alloy containing alumina".

b. Please re-write claim 53 as follows:

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53. (Previously Presented) Amended) The article as recited in claim 52 wherein the refractory component is selected from the group consisting of alumina, silica, silica-alumina, alumina-silicates, alumina-zirconia, alumina-chromia, and alumina-ceria.

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c. In line 1 of claim 62, please delete the phrase "metal substrate".

d. In line 1 of claim 67, please delete the phrase "metal substrate".

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*e. Please cancel non-elected claims 71 and 75-77 without prejudice.*

Claim 40 has been amended to remove divergent/redundant subject matter therein. Claim 53 was rewritten to ensure proper format. Claims 62 and 67 have been amended to ensure proper antecedent basis.

### ***Allowable Subject Matter***

3. Claims 1-3, 18-26, 31, 37-45, and 52-70 are allowed.

### ***Reasons for Allowance***

4. The following is an examiner's statement of reasons for allowance:

The prior art of record does not teach or suggest the claimed article comprising a metal substrate having a substrate surface (comprising at least one metal oxide selected from alumina and rare earth metal oxides), and a catalyst supported on the substrate, said catalyst comprising at least one catalyst layer having an outer catalyst layer surface, wherein the catalyst comprises at least one catalytically active particulate material, and the outer catalyst layer surface comprises agglomerates of the particulate material, said agglomerates having an average diameter of from about 20 to about 200 micrometers, and wherein the agglomerates at the outer catalyst layer surface adhere to each other to form peaks from about 20 to about 500 micrometers formed by depositing at least two strata of

the catalytically active particulate material, with each strata having a thickness of up to 20 micrometers.

The prior art also does not teach or suggest Applicants' claimed method of making the aforementioned article.

Hu et al. (U. S. Patent No. 5,597,771), while teaching a catalyst composite having first and second layers comparable to that respectively claimed, do not teach or suggest Applicants' claim limitations regarding the catalyst layer being in the form of agglomerates. Further, the layers disclosed in Hu et al. are not disclosed as "strata being up to 20 micrometers in thickness".

Although the composite of Hu et al. is similar to that instantly claimed, the reference does not teach or suggest Applicants' claimed features.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

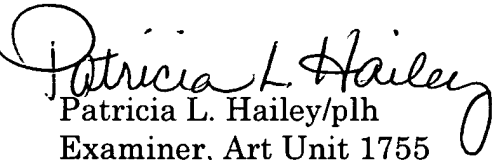
### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia L. Hailey whose telephone number is (571) 272-1369. The examiner can normally be reached on Mondays-Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark L. Bell can be reached on (571) 272-1362. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group 1700 Receptionist, whose telephone number is (571) 272-1700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Patricia L. Hailey/plh  
Examiner, Art Unit 1755  
January 18, 2005

  
DAVID SAMPLE  
PRIMARY EXAMINER